

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

AMENDMENTS TO THE CLAIMS

The following claims replace all prior versions and listings of claims in the application:

1 (currently amended). A distributed conferencing system, comprising:

a system communication bus;

a plurality of conferencing nodes connected to said system communication bus, each of said plurality of conferencing nodes a local node in relation to a plurality of remote nodes, comprising:

~~means~~ a plurality of power measuring devices for measuring a characteristic of each of a number of local participant input signals;

~~processing means~~ a processor, connected with said ~~measuring means~~ power measuring devices, for distinguishing significant a number of strongest signals ~~from non-significant signals~~ within said local participant input signals by comparison of said measured characteristic;

~~communication means~~ a multiplexer, connected with said processing ~~means~~ processor and said system communication bus, for communicating said measured characteristic of each of said significant strongest local participant input signals, to said plurality of remote conferencing nodes ~~nodes~~; and a demultiplexer, connected with said a processor and said system communication bus, for receiving said measured characteristic of each of said significant signals of remote participant input signals from said plurality of

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

conferencing nodes;

~~comparison means for comparing wherein said processor compares said~~
measured characteristic of each of said ~~significant~~ strongest signals of said local
participant input signals and said strongest remote participant input signals.

2 (Currently Amended). ~~[[A]] The~~ distributed conferencing system according to Claim
1, wherein: ~~said wherein said~~ measured characteristic is ~~the~~ a power level of said
signal local and said remote participant input signals.

3. (Currently Amended) ~~[[A]] The~~ distributed conferencing system according to
claim 2, wherein: ~~said processing means identifies wherein said processor~~
distinguishes the strongest local participant input signals ~~having the by determining~~
the highest power levels from the power levels measured from the local participant
input signals.

4 (Currently Amended). ~~[[A]] The~~ distributed conferencing system according to
Claim 2, each of said nodes further comprising:

a gain control means module, interconnected with said processor and said
power measuring devices, for individually controlling a gain applied to each of said
number of local participant input signals, after said power measuring ~~means has~~
devices have measured the power on said number of local participant input signals;

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

and

~~summing means~~ a combiner, interconnected with said processor and said multiplexer, for summing said number of local participant input signals, after said gain control has been applied to said number of local participant input signals.

5 (Currently Amended). The distributed conferencing system of claim 4, ~~wherein:~~
~~said communication means also wherein said~~ multiplexer communicates said summed number of local participant input signals to all other of said plurality of conferencing nodes.

6 (Currently Amended). The distributed conferencing system of claim 5, ~~wherein:~~
~~said wherein said communication means further comprises a multiplexing means for~~
~~multiplexing~~ multiplexer converts said summed number of local participant input signals and said measured power levels for a plurality of said number of local participant input signals into a multiplexed node signal.

7 (Currently Amended). The distributed conferencing system of claim 6, ~~wherein:~~
~~said communication means further comprises a demultiplexing means for~~
~~demultiplexing said wherein said demultiplexer receives and demultiplexes each of the~~
~~multiplexed node signal~~ signals generated by each of the other nodes of said plurality of remote conferencing nodes.

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

8. (Currently Amended) The distributed conferencing system of claim 7, ~~wherein:~~
~~said wherein~~ said system communications bus is a time-division multiplexing bus
interconnecting said ~~communication means~~ multiplexer and said demultiplexer of each
of said plurality of conferencing nodes that conveys said multiplexed node signal
generated by each of said plurality of conferencing nodes.

9. (Currently Amended) The distributed conferencing system of claim 5, ~~wherein:~~
~~said processing means~~ wherein said processor determines the a relative power levels
level of each said summed number of local participant input signals communicated-
~~said remote participant input signals~~ from said plurality of remote conferencing nodes.

10. (Currently Amended) The distributed conferencing system of claim 1, ~~wherein:~~
~~at wherein,~~ at each of said plurality of conferencing nodes, said ~~processing means~~
processor identifies a number, N, of said ~~significant participant input~~ strongest signals
from among said local participant signals.

11. (Currently Amended) The distributed conferencing system of claim 10,
~~wherein:~~ at wherein, at each of said plurality of conferencing nodes, said ~~processing~~
~~means~~ processor identifies a number, N, of said ~~significant participant input~~ strongest
signals from among said local participant signals and a set of additional strongest
signals communicated ~~said participant signals~~ from said plurality of remote

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

conferencing nodes.

12. (Currently Amended) The distributed conferencing system of claim 10, ~~wherein: at~~ wherein, at each of said plurality of conferencing nodes, said ~~processing means~~ processor causes said gain control ~~means~~ module to apply a gain level that effectively mutes each of said number of local participant input signals that is not one of said number, N.

13. (canceled)

14. (Currently Amended) The distributed conferencing system of claim 12, ~~wherein: at~~ wherein, at each of said plurality of conferencing nodes, said ~~plurality~~ number of local participant input signals having their measured power communicated to all other of said plurality of conferencing nodes are a set of said number of local participant input signals having ~~the greatest~~ highest power levels.

15. (Currently Amended) The distributed conferencing system of claim 14, ~~wherein: said wherein said~~ number, N, of the number of local participant input signals from said plurality of conferencing nodes having the ~~greatest~~ highest power levels is set equal to the number of said plurality of remote participant input signals having their measured power communicated to all other of said plurality of conferencing nodes.

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

16 - 19. (Canceled)

20. (Currently Amended) The distributed conferencing system of claim 4, ~~further comprising: combining means, interconnected with said communication means and said gain control means, for combining said number of remote participant input signals from each of said plurality of conferencing nodes, after said gain control has been applied to said number of local participant input signals; and~~
~~— outputting means for outputting said combined number of local participant input signals from each of said plurality of conferencing nodes to each of a number of local conference participants creating said local participant input signals; wherein said outputting means effectively gain control module mutes the contribution of each of the number of local conference participant's own input signal, within said combined number of local participant input signals, before outputting said combined number of local participant input signals to said number of conference participants.~~

21. (Currently Amended) A method for transmitting communication signals in a telephony conferencing system, comprising:

connecting a plurality of telephony conference nodes, comprising a local conference node and at least one remote conference node, to a system communication bus;

connecting a plurality of local communication channels to said local conference

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

node and a plurality of remote communication channels to each of said local and said remote conference nodes node;

measuring power levels of local input signals received in the local conference node through the local communication channels;

measuring power levels of remote input signals received in the remote conference node through the remote communication channels;

selecting, in said local conference node, a set of the local input signals received in said local communication channels that are measured with highest power levels in said local conference node and transmitting said set of the local input signals and said highest power level measurements of said set of the local input signals to said remote conference node;

determining, in said remote conference node, a set of remote input signals received in said remote communication channels having highest power levels in said remote node and transmitting said set of remote input signals and said highest power level measurements of said set of remote input signals to said local conference node;

comparing, in each node, ~~said power level measurements for all of said local and said remote sets of input signals~~ the measured power levels of the local input signals with the measured power levels of the remote input signals to determine the local input signals and the remote input signals with highest power levels;

determining, in said local conference node and said remote ~~nodes~~ conference node, an aggregate sum of said remote input signals and said local input signals

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

having said highest power levels from said comparing ~~all of said local and remote sets of input signals~~; and

transmitting said aggregate sum to each of said local communication channels and said remote communication channels as an output, wherein, if one of said local input signals includes said highest power levels, then transmitting said one of said local input signals to said local communication channels as an output.

22. (Currently Amended) The method of claim 21, wherein each of said local communication channels and each of said remote communication channels receives an output of outputs voice signals that are converted from said aggregate sum input signals.

23. (Currently Amended) The method of claim 21, wherein, further comprising:
if one of said ~~set of~~ local input signals is determined as having ~~has~~ the highest power levels, applying a gain said one of said local input signals.

24. (Currently Amended) The method of claim 21, further comprising:
~~modifying a gain for said set of signals within each node and muting said local~~
input signals not within said aggregate sum ~~set of~~ local input signals and of said
remote input signals.

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

25. (Currently Amended). The method of claim 21, further comprising:
- providing a combiner in ~~each~~ the local conference node for summing ~~each set~~
~~of the local input signals into a summed local signal~~; and
- transmitting said summed local signal and ~~said highest power levels for each~~
~~set of the power level measurements of the local input signals~~ to said ~~nodes~~ remote
conference node that is connected to said system communication bus ~~other than a~~
~~node originating said summed signal~~.